In the Claims

Please amend the following claims:

1. (Amended) A method of performing maintenance on a network access server having associated channels, the network access server being operatively coupled with a service request switch, the method comprising:

determining whether off-line maintenance is needed on a network access server and if so then communicating a busy condition of any unused associated channel from the network access server to the service request switch;

monitoring any used associated channel and waiting until the used associated channel becomes substantially unused;

when the used associated channel becomes substantially unused, communicating a busy condition of such then-unused channel from the network access server to the service request switch; and

signaling that maintenance on the network access server can be performed.

2. The method of claim 1 which after completion of the maintenance further comprises communicating an idle condition of any associated channel to the service request switch.

3. The method of claim 2 wherein said communicating is performed via a standard communication protocol between the network access server and the service request switch, the standard protocol normally communicating the busy/idle condition of any associated channel of the network access server to the service request switch.

4. The method of claim 1 which further comprises automatically routing any new client service requests that may arrive during a busy condition of the network access server to another network access server operatively coupled with the service request switch.

5. Apparatus for performing maintenance on a given network access server operatively coupled with a telephone company (telco) switch, the apparatus comprising:

a scheduler for scheduling off-line maintenance for a given network access server;

a channel usage monitor responsive to said scheduler for monitoring usage of the associated channels of the given network access server; and

a make-busy mechanism responsive to said channel usage monitor and coupled with the telco switch for signaling the telco switch that all channels are busy,

whereby maintenance is performed on the given network access server after said signaling and upon a determination by said channel usage monitor that no channel is currently in use.

6. The apparatus of claim 5, wherein the signaling by said make-busy mechanism is performed via a standard communication protocol between the network access server and the telco switch, the standard protocol normally communicating a busy/idle condition of any associated channel of the network access server to the telco switch.

7. The apparatus of claim 5, wherein the signaling by said make-busy mechanism is in accordance with predefined network software, firmware and hardware infrastructures.

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8. (Amended) A method of temporarily taking offline for service a given network access server having plural associated channels, the given network access server being operatively coupled with a network service request switch, the method comprising:

busying out any unused channels of the given access server and communicating a busy condition thereof to the service request switch;

monitoring any used associated channel;

during said monitoring, awaiting substantial non-use of any remaining associated channels of the given access server and thereafter communicating a busy condition thereof to the service request switch;

signaling that service to the given access server can be performed; and

after such service is completed

communicating a substantially idle condition of the associated channels to the service request switch.

9. The method of claim 8 which further comprises auto-routing any new client service requests that may arrive during said performing of the service to an other access server operatively coupled with the service request switch.

10. The method of claim 9 wherein plural access servers are within a given hunt group that includes the given access server and the other access server.

11. The method of claim 8 which further comprises scheduling the service manually by command to the given access server.

12. The method of claim 8 which further comprises scheduling the service automatically by command to the given access server from a system administrator software program residing within the network.

13. A computer-readable medium containing a program for taking an active network access server off line for maintenance, the active network access server being operatively coupled with a telephone company (telco) switch, the program comprising:

a maintenance scheduler for scheduling off-line maintenance for a given network access server;

a channel usage monitor responsive to said scheduler for monitoring usage of the associated channels of the given network access server; and

a make-busy mechanism responsive to said scheduler and to said channel usage monitor and coupled with the telco switch for signaling the telco switch that all channels are busy,

whereby maintenance is performed on the given network access server after such signaling and upon a determination by said channel usage monitor that no channel is currently in use.

14. The program of claim 13 wherein such signaling by said make-busy mechanism is performed via a standard communication protocol between the network access server and the telco switch, the standard protocol normally communicating a busy/idle condition of any associated channel of the network access server to the telco switch.

15. The program of claim 13 wherein the signaling by said make-busy mechanism is in accordance with predefined network software, firmware and hardware infrastructures.

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16. (Amended) A computer-readable medium containing a program for performing maintenance on a network access server having associated channels, the network access server being operatively coupled with a service request switch, the program comprising:

instructions determining whether off-line maintenance is needed on a network access server;

instructions communicating a busy condition of any associated channel from the network access server to the service request switch;

instructions monitoring any used associated channel and waiting until the used associated channel becomes substantially unused;

instructions, operative when the used associated channel becomes substantially unused, communicating a busy condition of such then-unused channel from the network access server to the service request switch; and

instructions signaling the network access server that maintenance can be performed, said communicating, said monitoring-and-waiting, said communicating and said signaling instructions being executed selectively upon a determination that off-line maintenance is needed.

17. (Amended) A computer-readable medium containing a program for temporarily taking offline for service a given network access server having plural associated channels, the given network access server being operatively coupled with a network service request switch, the program comprising:

instructions busying out any substantially unused channels of the given access server and communicating a busy condition thereof to the service request switch;

instructions monitoring any used associated channel;

instructions awaiting termination of substantial use of any remaining associated channels of the given access server and thereafter communicating a busy condition thereof to the service request switch;

instructions signaling that service to the given access server can be performed; and

instructions communicating a substantially idle condition of the associated channels to the service request switch, said communicating instructions being executed selectively upon a determination that such service has been completed.